

Re-description of the holotype of *Vipera eriwanensis* (Reuss, 1933) (Serpentes: Viperidae)

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Re-description of the holotype of *Vipera eriwanensis* (Reuss, 1933) (Serpentes: Viperidae). - The missing holotype of *Vipera eriwanensis* described by Reuss in 1933 is re-described, and the questions relating to the source, number of individuals and species in the type series are answered. A review of the papers by Reuss relating to this taxon is made, and a complete chresonym list is given. The decisions leading to the designation of a neotype are discussed, remarks are made on the source of the individual, the revalidation of the holotype and accordingly the change of the type locality is proposed.

Keywords: Taxonomy - neotype - holotype - type locality - Armenia.

INTRODUCTION

The systematics of the steppe vipers of the *V. ursinii* and *V. renardi* groups is one of the most debated subjects in viperid taxonomy. Recently, Nilson & Andrén (2001) evaluated the taxonomy of these groups and answered, to some extent, many of the questions.

Vipera eriwanensis is a small sized viper from the *Vipera (Acridophaga) ursinii* complex with a distribution restricted to the Armenian plateau, including the political regions of Armenia, western Azerbaijan and eastern Turkey (Nilson & Andrén, 2001).

The taxon was described by Reuss (1933) as *Acridophaga (renardi) eriwanensis* based on a male specimen in the Zoological Museum, Berlin (ZMB) collected according to Reuss by Prof. Ramme during a trip in 1929. The author set the type locality as: near Eriwan (Yerevan), at around 2000 m altitude. The one sentence long description contained just three characters, 21 dorsal scales, 140+1 ventral scales and 9 supralabial scales, thus this diagnosis may fit other Viperid taxa in the area as well. A more detailed description, containing beneath the previously mentioned three characters the number of subcaudal scales (37¹/₂ on the left, 37 on the right plus 1 scale), and accompanied by a drawing (Fig. 5a on page 215) and a photograph of the head of this individual (Fig. 5 on page 217), was published later (Reuss, 1935b) (Fig. 2). Interestingly, the details on the source of the individual do not agree in the two works. Reuss (1935b) noted that the specimen was collected by Prof. Dr Ramme and head of preparatory Richter from the Zoological Museum, Berlin during a research trip

in 1929/30. He also mentioned that he had the snake alive for some time, but now, it is in the teaching collection (“Lehrsammlung”) of the Museum.

In general nobody wanted to deal with the taxa described by Reuss. He was a splitter, describing in fifteen years over 50 new taxa of Viperidae from Europe and Asia. Reuss was severely criticized about his publications throughout his life (e.g. Lankes, 1925; Müller, 1929; Werner, 1930; Stucken, 1935) as these new taxa did not resolve any questions, but led to complete chaos in the European and Asian Viperidae taxonomy. Many of the Reuss types could not be found, and some of his taxa were never mentioned in lists of synonymy. The only one who tried, and gave a list of some taxa and types described by Reuss, was Schwarz (1936). Most probably his identification of the type status of many individuals was based on the personal communications with Reuss and not published data.

Schwarz (1936) had not listed the specimen from Yerevan as being one of the known museum specimens at that time. This might have been the reason why Kramer (1961) stated that the type had disappeared. His statement was taken as a fact, and later several authors, with or without reference to Kramer’s work, stated that the type is lost (Saint Girons, 1978; Joger, 1984; Bruno, 1985; Golay *et al.*, 1993; McDiarmid *et al.*, 1999; Nilson *et al.*, 1999; Kutrup *et al.*, 2005). It seems that Kramer (1961) was wrong in this case and with some other Reuss types as well. He also stated that the type of *Acridophaga uralensis* (presently a synonym of *Vipera renardi renardi*) stored in the ZMB was destroyed, which is not true; it is still preserved in the collection (Holotype ZMB 2856, Paratype ZMB 65910).

Confusion was caused by a photograph published in 1929 (Reuss, 1929). The short paper on snake venoms (Reuss, 1929) included four photographs of different *Vipera* species, one of them depicting a living small sized viper, which was not the same as that depicted by Reuss in 1935 (Reuss, 1935b). Nilson *et al.* (1999) and Nilson & Andrén (2001) supposed that the type series consisted of more than a single specimen. This was based on personal communication with Erich Sochurek and a reproduction of the 1929 photograph which according to Sochurek showed the type. Nilson *et al.* (1999) argued that this photograph of a live specimen shows a viper of the *Vipera kaznakovi* complex, which might be *V. darevskii*, *V. pontica* or *V. dinniki*, thus in the absence of type material and for reasons of stability considered it appropriate to designate a neotype. Actually Reuss had only a single male individual, and all of his remarks about this taxon were based on this specimen (Reuss, 1933, 1935b, 1937). The misleading picture (p. 37 in Reuss, 1929) shows a viper of the *Vipera ursinii* complex, probably *V.u. macrops*, which is also stated in the photograph’s caption (“Orsinsche Kreuzotter”-Ursinii Adder). The name *eriwanensis* has not been used in this paper, and no other paper published before the description (i.e. Reuss, 1933). The slide archive of the Natural History Museum in Vienna houses a reproduction of this photograph, which was probably sent to Nilson and co-workers by Erich Sochurek. This work of Reuss has been erroneously cited as “Fünf Fotos von Giftschlangen” instead of “Schlangengift-ein Verjüngungsmittel?” (Kramer, 1961; Nilson *et al.*, 1999; Nilson & Andrén, 2001).

A neotype was designated by Nilson *et al.* (1999), an adult male (GNM Re.ex. 5158) collected on the mountain Ara-Iler, Armenia, north of Yerevan in May 1972 and

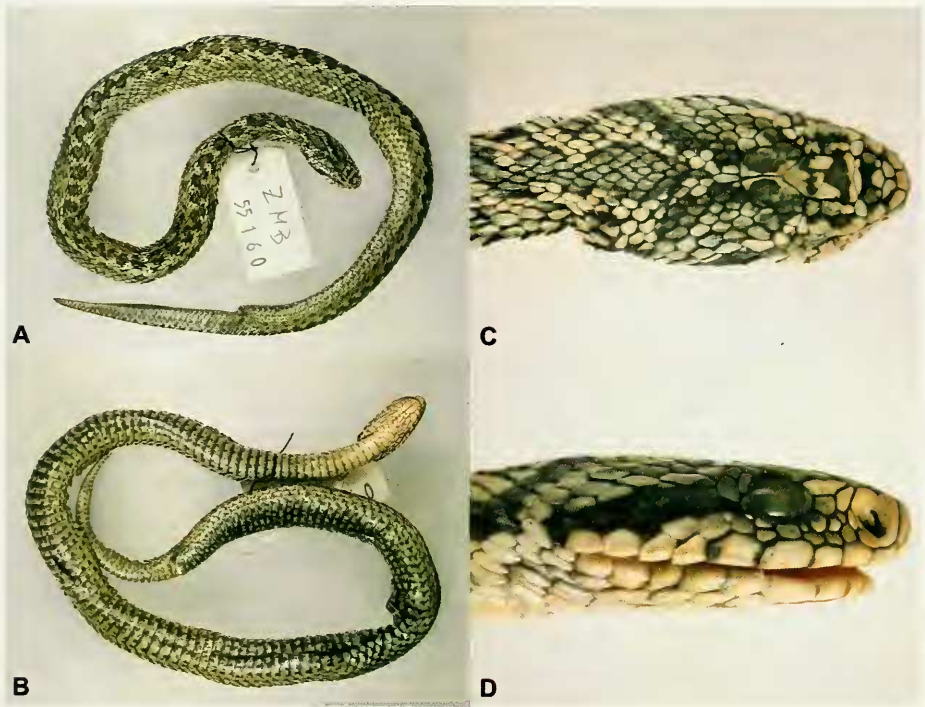


FIG. 1

The holotype: dorsal view (A), ventral view (B), dorsal view of the head (C), and lateral view of the left side of the head (D). Photographs by Michael Franzen.

donated by the Zoological Institute, St. Petersburg to Göteborg Natural History Museum.

The *V. eriwanensis* type individual was rediscovered in September 2005 during a revision of the *Vipera* material, including the Reuss collection, housed in the ZMB.

The specimen catalogued as ZMB 55160 remained unnoticed in the teaching collection for several decades; it was probably moved into the main collection in the 1990s and received the actual catalogue number in 1996. The snake was donated by the collectors, Ramme and Richter, to the ZMB on 9 May 1928 (together with 21 other amphibians and reptiles from Persia, Armenia and Caucasus under number C 869 of the access-catalogue). The actual jar contains an original label written by the collectors containing the following information: Armenia Goktscha-See (Lake Sevan) above Shordzsha (Shordzha), at 2000 m altitude, 2.IX.1927 †21.XI.1927, Ramme-Richter S.G., *Acridophaga renardi* ("Bergform"-Mountain form), weight 29 in alcohol, before 28 gr.

The area of Shordzha lays within the known range of the species and is a well known locality for *Vipera eriwanensis* (Chernov, 1939; Orlov & Tuniyev, 1990; Nilson *et al.*, 1995; Aghasyan, 1996; Nilson & Andrén, 2001).

We can just hypothesize why Reuss has written the locality Yerevan. One possibility might have been, that he chose this well known locality because only a few people were aware of the location of the Lake Sevan.

CHRESONOMY

- A.[cridophaga] (renardi) eriwanensis* Reuss, 1933: 373.
Acridophaga renardi eriwanensis—Reuss (1935a: 152).
Acridophaga renardi eriwanensis—Reuss (1935b: 216, 215-Fig. 5a, 217-Fig. 5). [Incorrect spelling, lapsus for *eriwanensis*, hence not available (ICZN 1999: Art. 33.3.).]
Vipera ursinii renardi (part.)—Schwarz (1936: 186).
A.[cridophaga] renardi eriwanensis—Reuss (1937: 1788). [Incorrect spelling, lapsus for *eriwanensis*, hence not available (ICZN 1999: Art. 33.3.).]
Vipera ursinii renardi (part.)—Mertens & Wermuth (1960: 203).
Vipera ursinii renardi (part.)—Kramer (1961: 698, 699, 700, 701, 715). [Assigned to the western group of his southeastern and southwestern steppe form—“südöstliche und südwestliche Steppenform”.]
Acridophaga eriwanensis—Kramer (1961: 715). [As cited in the synonymy of *Vipera ursinii renardi*.]
Vipera ursinii ebneri (part.)—Saint Girons (1978: 582, 583).
Vipera ursinii eriwanensis (part.)—Joger (1984: 62, 63).
Vipera ursinii eriwanensis (part.)—Golay *et al.* (1993: 290).
Vipera ursinii eriwanensis (part.)—Bruno (1985: 74).
Vipera ursini eriwanensis—Orlov & Tuniyev (1990: 2, 6, 8, 10, Plate 3, 19-Fig. 9, 22, 23, 24, 30-Fig. 16, 31). [Incorrect subsequent spelling for *ursinii*.]
Vipera eriwanensis—Höggren *et al.* (1993: 12, 17).
Vipera ursinii—McDiarmid *et al.* (1999: 409).
Vipera eriwanensis—Nilson & Andrén (2001: 218, 219, 220, 221, 222, 223, 224).
Vipera renardi eriwanensis—Joger & Dely (2005: 343, 345, 348, 349).

DESCRIPTION OF THE HOLOTYPE

ZMB 55160; adult male; Lake Sevan above Shordzha at 2000 m a.s.l. [Yerevan], Armenia; Ramme and Richter leg. 2.IX.1927; Ramme and Richter don. 9.V.1928.

BODY PROPORTIONS (all in mm; measures right/left; *un-measurable): body length 370; tail length 55; head length (from the corner of the mouth) 16.32; head width (at its widest part) 10.55; head depth (behind the eyes) 5.13; distance between the eyes (measured on the dorsal edge of the eyes, across the head) 6.87; distance between the eyes and the rostrum (between the anterior edge of the eye and the rostrum) 5.49/5.61; eye vertical diameter (longest diameter) */2.02; eye horizontal diameter (longest diameter) 2.65/2.75; distance between the lower edge of the eyes and the edge of the mouth */1.96; fontal length 4.27; frontal width 2.98; rostral length 2.65; rostral width (distance between the contact points with the apical scale) 0.70; rostral width (distance between contact points with the nasorostral scales) 2.59; nasal diameter (longest) 2.67/2.69; nostril diameter (longest) 1.20/1.24.

SCALATION (counts right/left; *un-countable): 4 prefrontals; 135 ventrals; 23 dorsals on the neck (counted at the 10th ventral); 21 on midbody (in the middle of the rostrum-cloaca length); 17 on the tail (5 ventrals from the anal scale); last row with 23 dorsal scales, at 14th ventral; first row with 21 dorsals, at the 15th ventral; reduction from 21 to 19 dorsals, at the 116th ventral; reduction from 19 to 17 dorsals, 131st ventral; subcaudals 36/36^{1/2} + 1; 9/9 supralabial scales; fourth and fifth supralabials

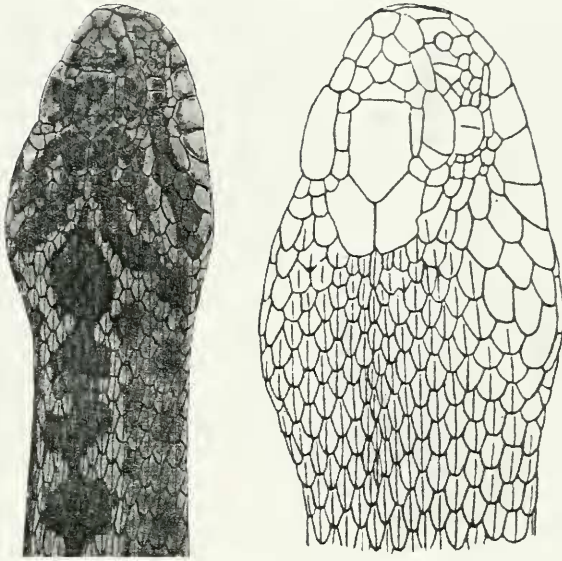


FIG. 2

Figure 5 and drawing 5a from the 1935 work by Reuss (1935b).

bellow the eyes; 10/10 sublabial scales; undivided rostral; rostral separated from the nasal scales by 1/1 nasorostral scale; nasal scales divided into 2 in the posterior middleline; nostrils situated on the bottom of the nasal scales; 5/5 loreal scales; 11/9 scales in the first circumocular row; 2/3 scales situated between the circumocular row and the supralabials, but do not form a complete second circumocular row; two big, undivided supraocular scales, separated from the frontal by 3/3 smaller scales; parietals big, not fragmented; one apical scale; 2/2 canthal scales; 5 intercanthal scales; 8 scales between the eyes (total number of scales between the supraoculars); 4 second chinshields; 6/5 scales on the sides of the mental row (the scales in first longitudinal rows are counted); */30 gular scales (total number of gular scales counted, delimited by the sublabials and the mental row).

COLOUR PATTERN (pale-caused by the alcohol; counts right/left): Dorsal pattern consists of 67/66 brown rounded zigzag windings on the body (the tips of the windings counted to the one above the cloaca), and 24/27 on the tail. The windings are bordered by a lighter (probably light brown) coloured area, while laterally the ground colour is darker. Lateral body pattern consists of narrow brown spots. Head pattern formed by two separated dark oblique bands, which run from the frontal scale to the lateral side of the head a bit backwards from the corner of the mouth. Two darker spots can also be observed: one covering the frontal, supraocular and intersupraocular scales the other the apical, canthal and intercanthal scales. Laterally two dark, 2-3 scales wide, bands are running from the corner of the eye to the corner of the mouth. Ventral side, both on body and tail, light but dark spotted, throat light (Fig. 1).

REMARKS

My scale counts greatly agree with Reuss'. The same number of dorsal and supralabial scales have been counted. The difference in the number of ventral scales is one, 140 according Reuss (counted probably without using a dissection microscope) and 139 (4 preventrals and 135 ventrals) according my counts. Reuss (1935b) counted $37\frac{1}{2}$ subcaudal scales on the on the left side, 37 on the right side, and probably included into here all paired bigger scales that are found on the ventral surface of the tail bellow the anal scale. I did not include the first pair of scales which are situated bellow the anal plate but are not connected with each other. As it can be assessed with certainty that the individual rediscovered is the holotype described by Reuss in 1933 and depicted on the figures of the 1935 work (Fig. 2), this should regain its type status, according to the Art. 75.8. of the International Code of Zoological Nomenclature (ICZN, 1999) and the neotype should be set aside. The erroneous type locality, Yerevan, should be corrected to with Lake Sevan above Shordzha at 2000 m a.s.l., the correct collection locality of the specimen according to the Recommendation 76A.2. of the Code (ICZN, 1999).

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